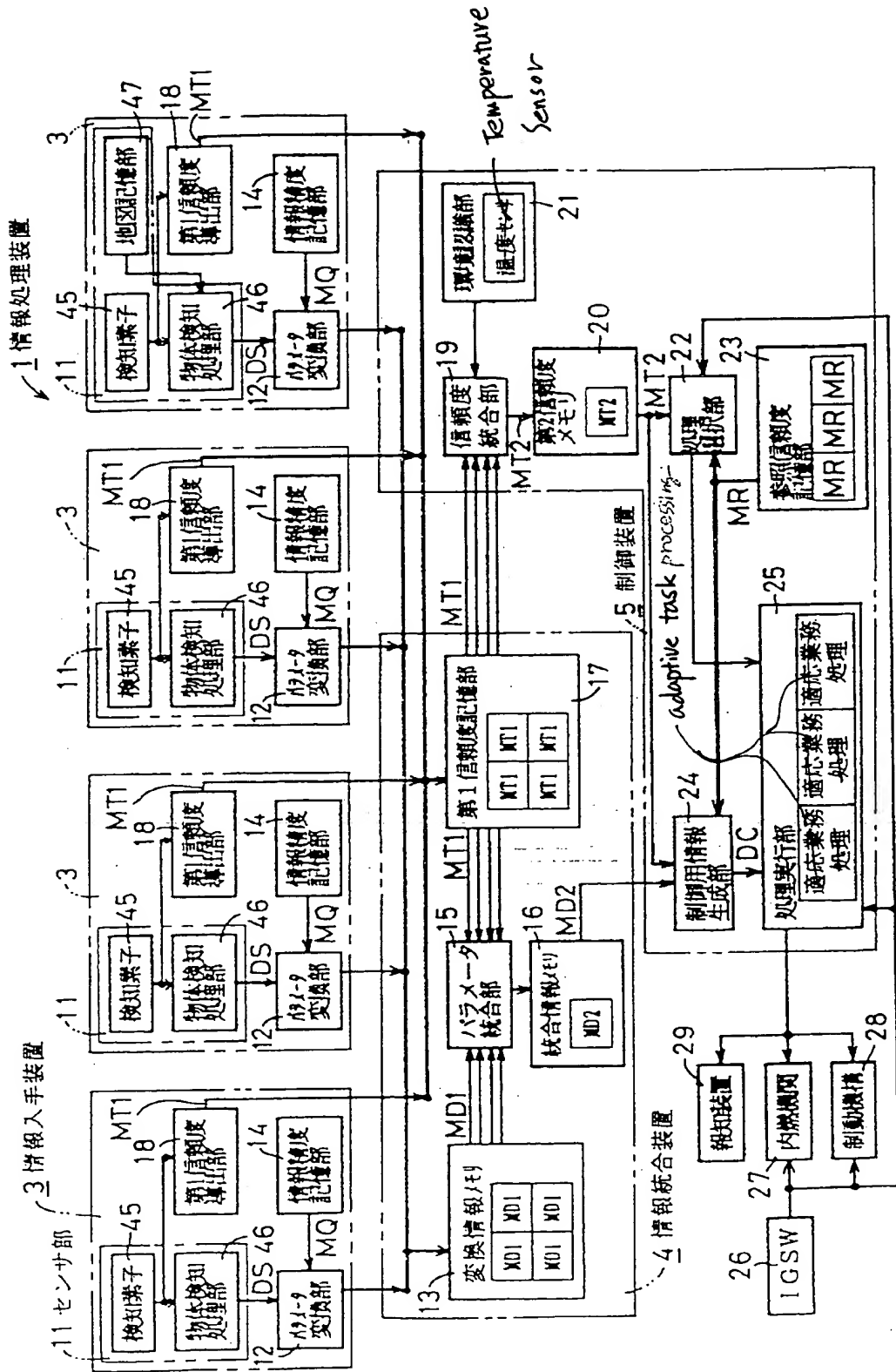


FIG. 1



- 1 INFORMATION PROCESSING APPARATUS
- 11 SENSOR
- 12 PARAMETER CONVERSION SECTION
- 15 PARAMETER INTEGRATION SECTION
- 19 RELIABILITY INTEGRATION SECTION
- 23 REFERENCE RELIABILITY STORAGE SECTION
- 26 IGNITION SWITCH
- 27 INTERNAL COMBUSTION ENGINE
- 28 BRAKE MECHANISM
- 29 ALARM
- 31 DETECTION SPACE
- 3 INFORMATION CAPTURING APPARATUS
- 13 CONVERSION INFORMATION MEMORY
- 17 FIRST RELIABILITY STORAGE SECTION
- 21 ENVIRONMENT RECOGNITION SECTION
- 24 CONTROL INFORMATION GENERATION SECTION
- 25 PROCESSING EXECUTION SECTION
- 29 ALARM
- 31 DETECTION SPACE
- 4 INFORMATION INTEGRATION APPARATUS
- 14 INFORMATION ACCURACY STORAGE SECTION
- 18 FIRST RELIABILITY DERIVATION SECTION
- 22 PROCESSING SELECTION SECTION
- 25 PROCESSING EXECUTION SECTION
- 31 DETECTION SPACE
- 5 CONTROLLER

FIG. 4

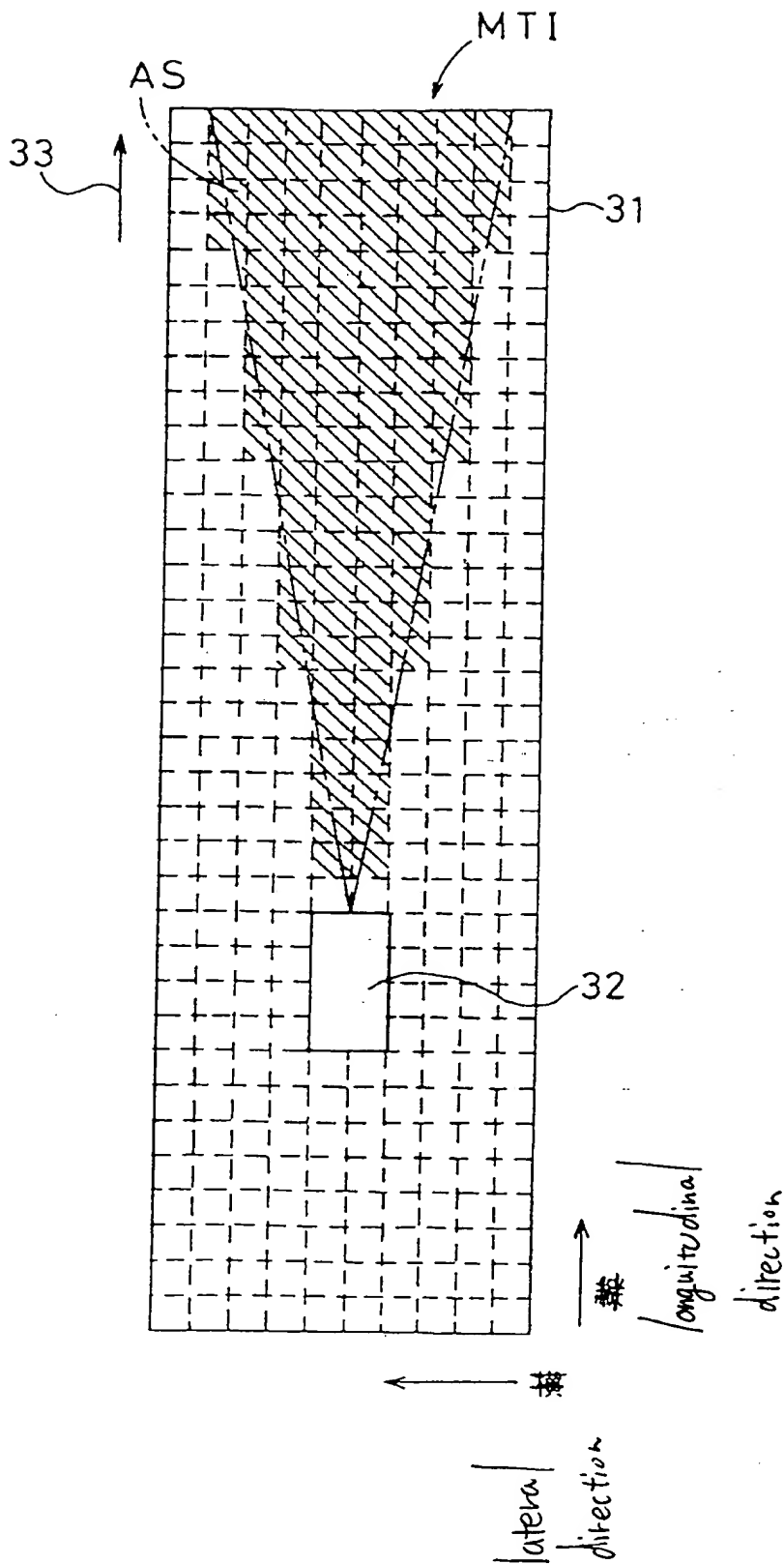


FIG. 5

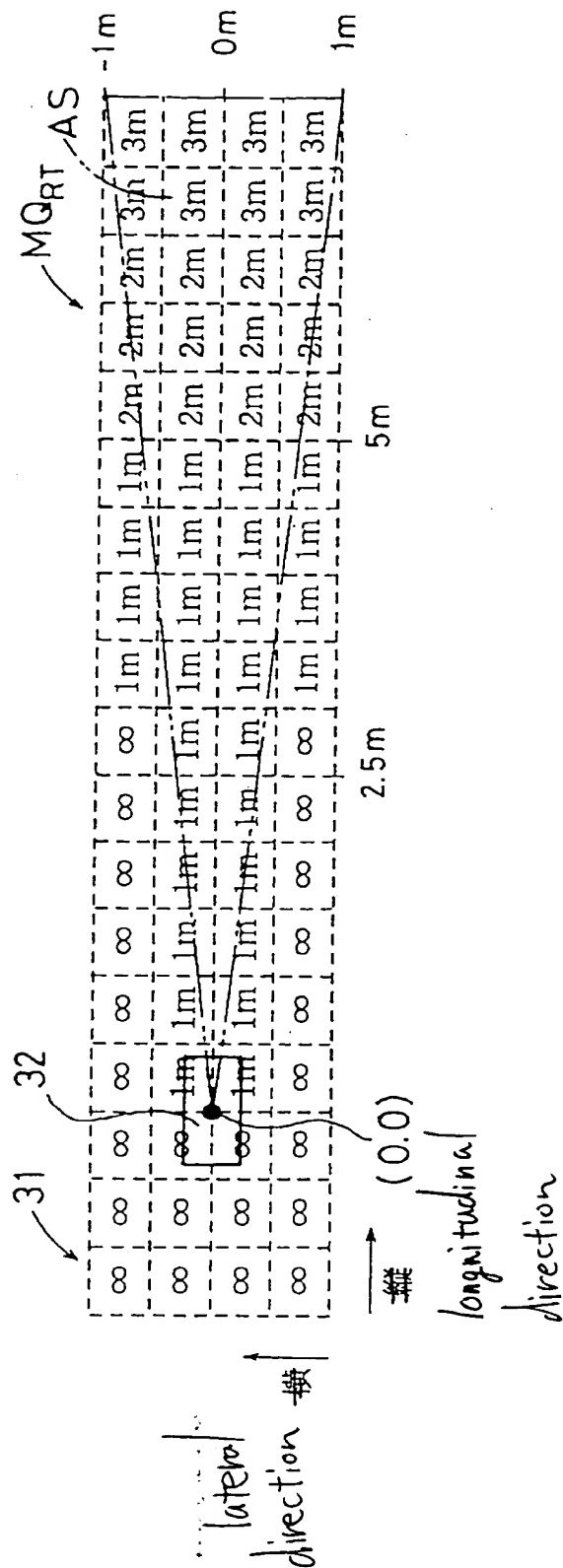
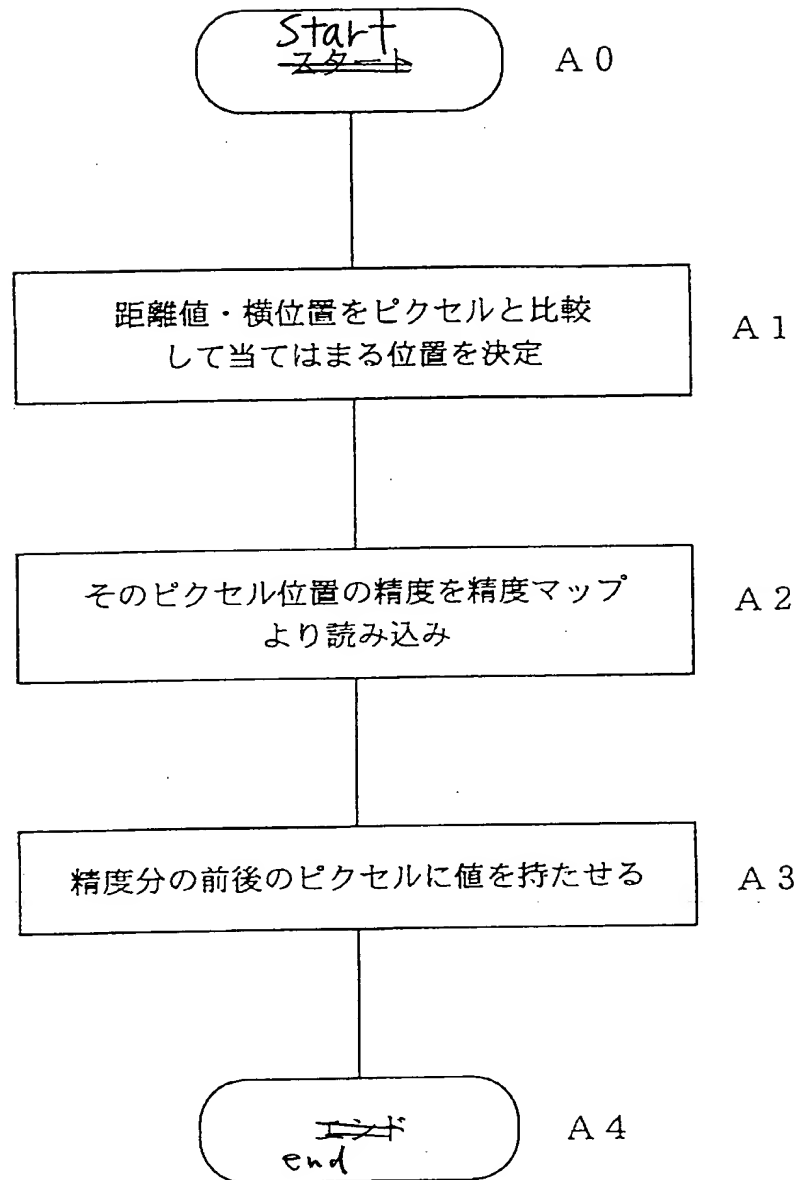


FIG. 6

6/18



A1 DETERMINE POSITION BY COMPARING DISTANCE AND LATERAL POSITION WITH PIXEL
A2 READ ACCURACY OF PIXEL POSITION FROM ACCURACY MAP
A3 IMPART VALUE CORRESPONDING TO ACCURACY TO ADJACENT PIXELS

09692101.102000

MQRT

MQ_{RF}

31



FIG. 8

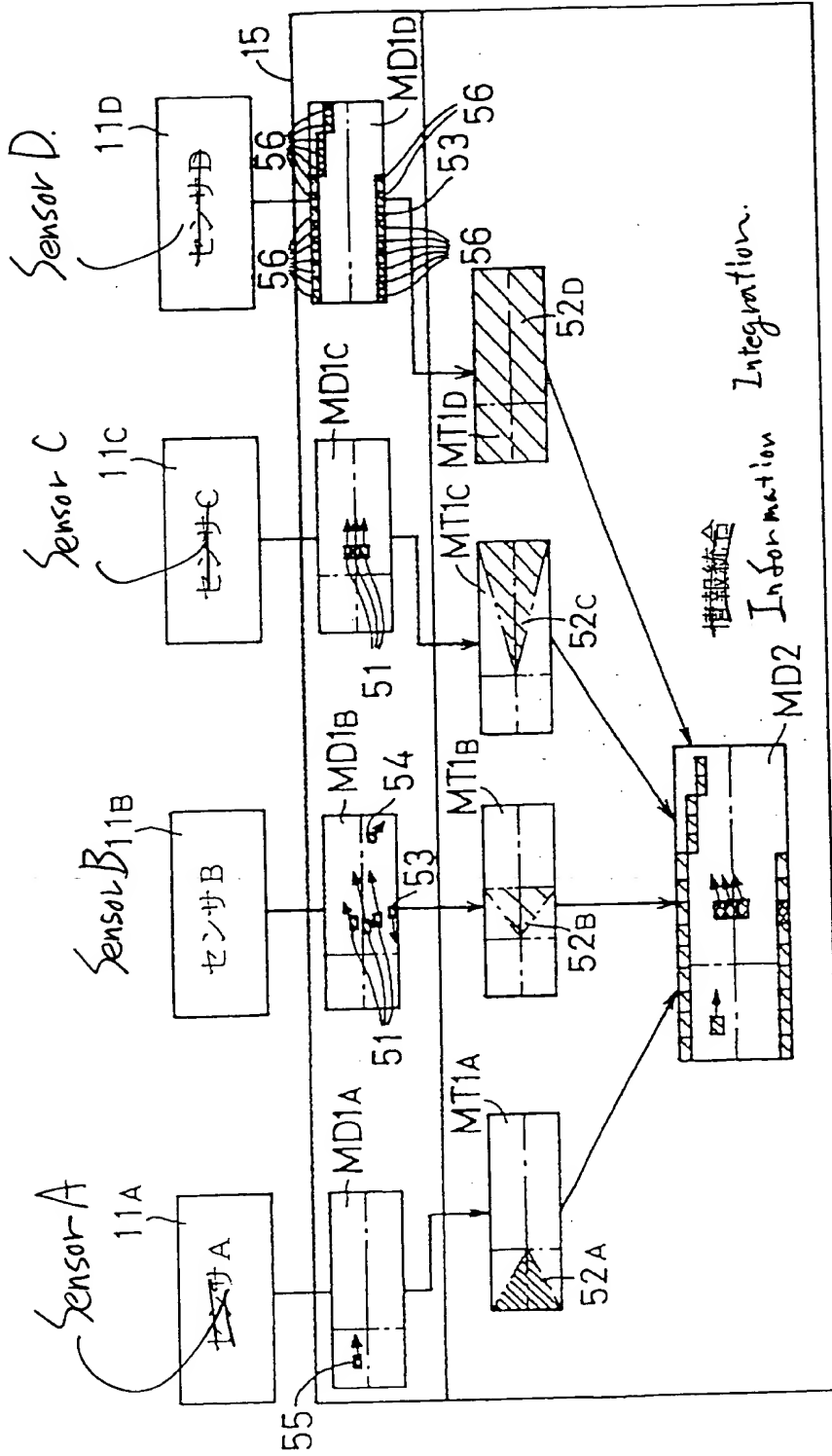
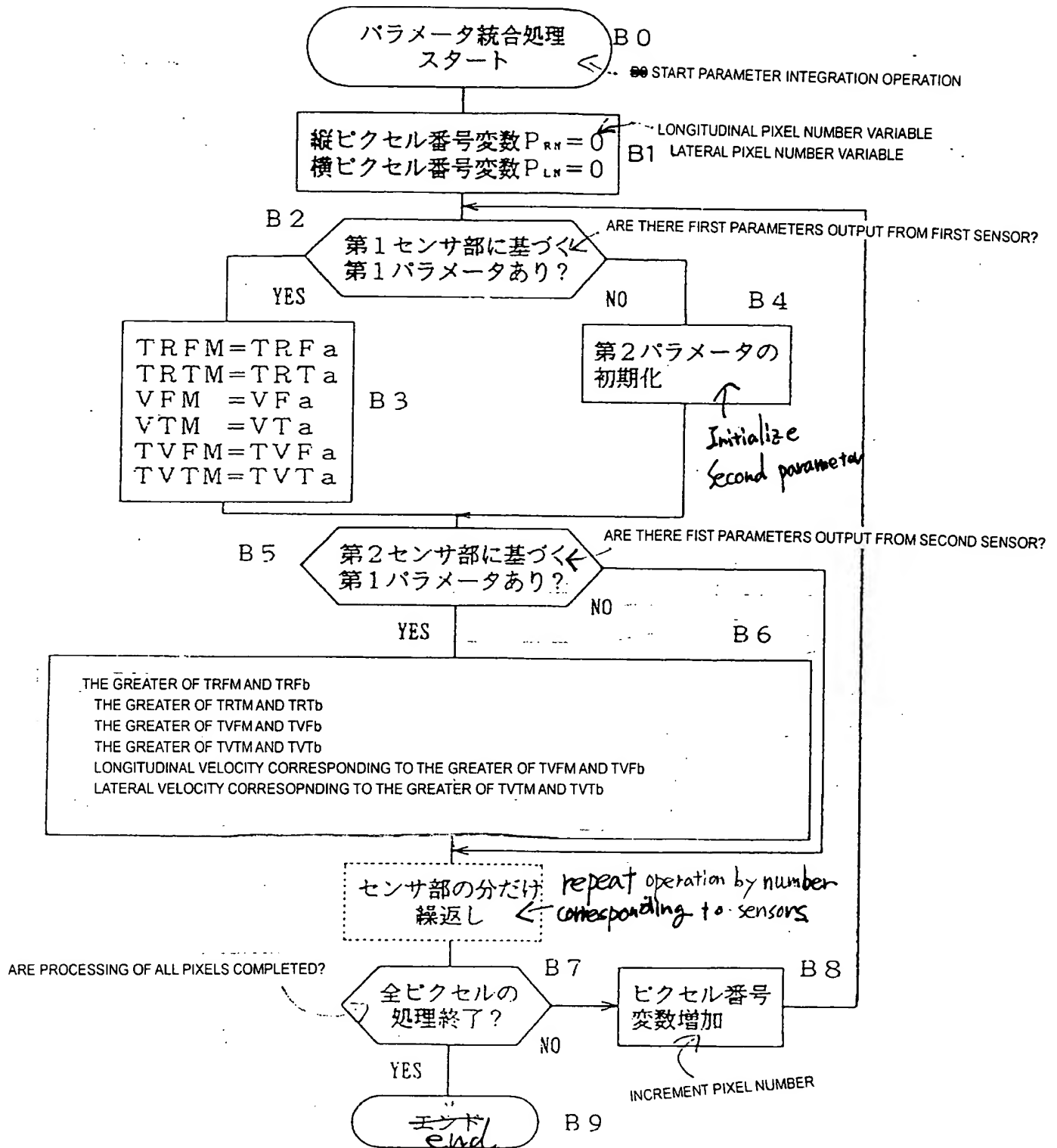


FIG. 9

9/18

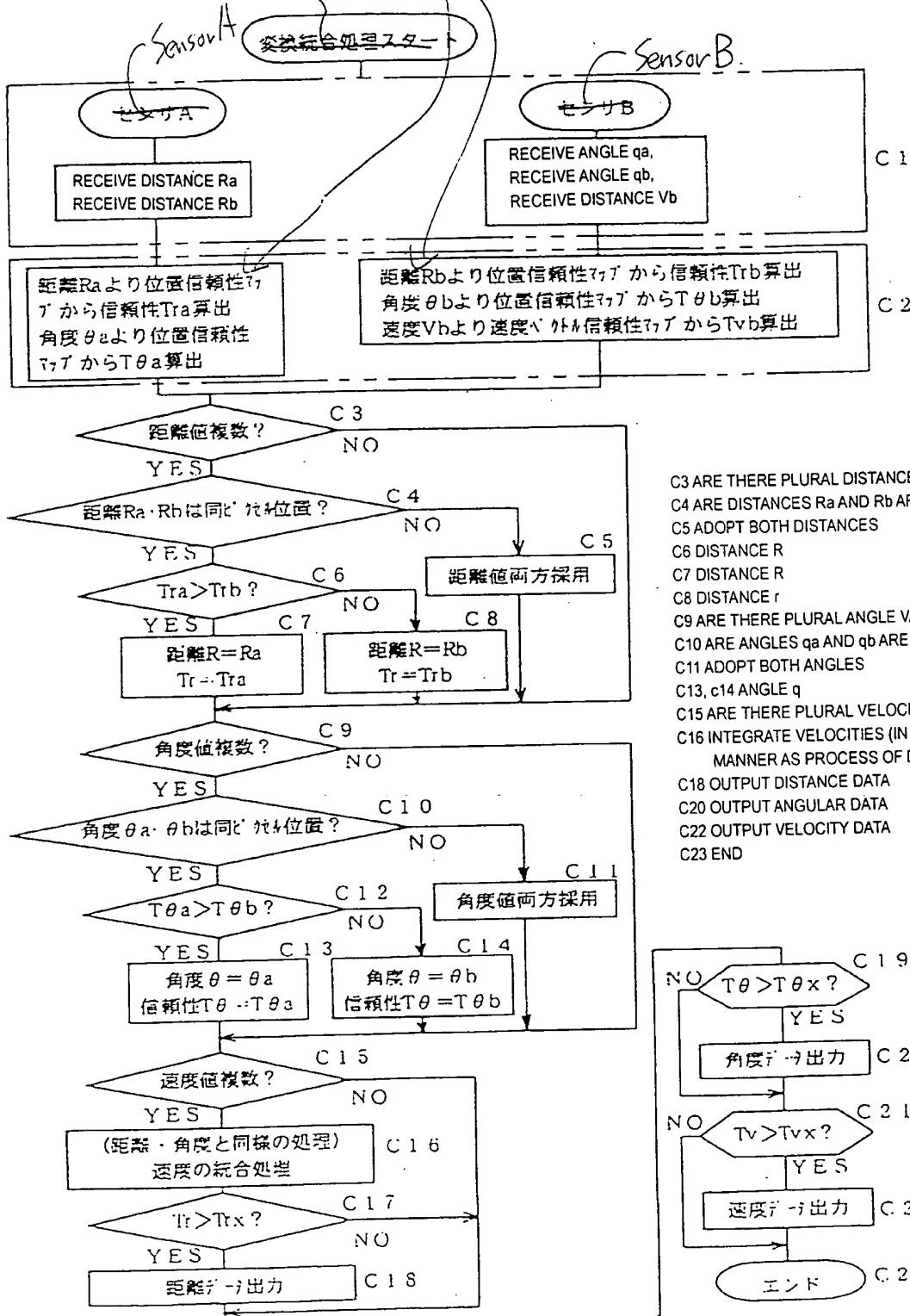


000201-10126960

FIG. 10

C2/ CALCULATE RELIABILITY T_{ra} FROM DISTANCE R_a BY REFERENCE TO POSITION RELIABILITY MAP,
CALCULATE T_{qa} FROM ANGLE q_a BY REFERENCE TO POSITION RELIABILITY MAP
CALCULATE RELIABILITY T_{rb} FROM DISTANCE R_b BY REFERENCE TO POSITION RELIABILITY MAP,
CALCULATE T_{qb} FROM ANGLE q_b BY REFERENCE TO POSITION RELIABILITY MAP
CALCULATE T_{vb} FROM VELOCITY VECTOR RELIABILITY MAP

10/18



C3 ARE THERE PLURAL DISTANCE VALUES?
C4 ARE DISTANCES R_a AND R_b ARE IN THE SAME PIXEL POSITION?
C5 ADOPT BOTH DISTANCES
C6 DISTANCE R
C7 DISTANCE R
C8 DISTANCE r
C9 ARE THERE PLURAL ANGLE VALUES?
C10 ARE ANGLES q_a AND q_b ARE IN THE SAME PIXEL POSITION?
C11 ADOPT BOTH ANGLES
C13, C14 ANGLE q
C15 ARE THERE PLURAL VELOCITY VALUES?
C16 INTEGRATE VELOCITIES (IN THE SAME MANNER AS PROCESS OF DISTANCE AND ANGLE)
C18 OUTPUT DISTANCE DATA
C20 OUTPUT ANGULAR DATA
C22 OUTPUT VELOCITY DATA
C23 END

00020201-102000

FIG. 11A

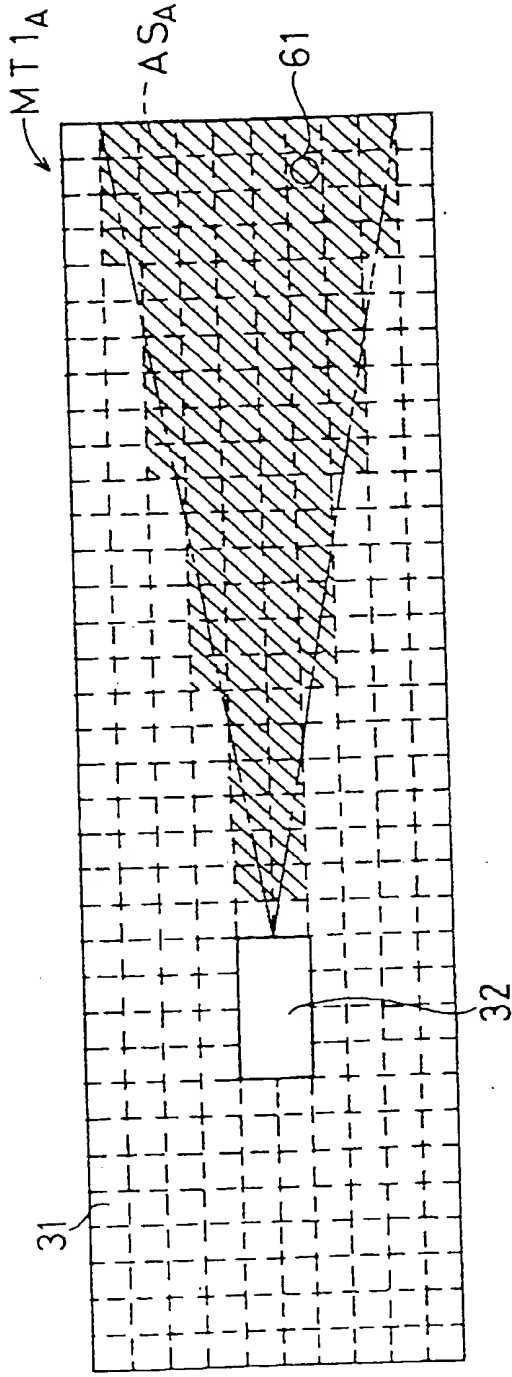
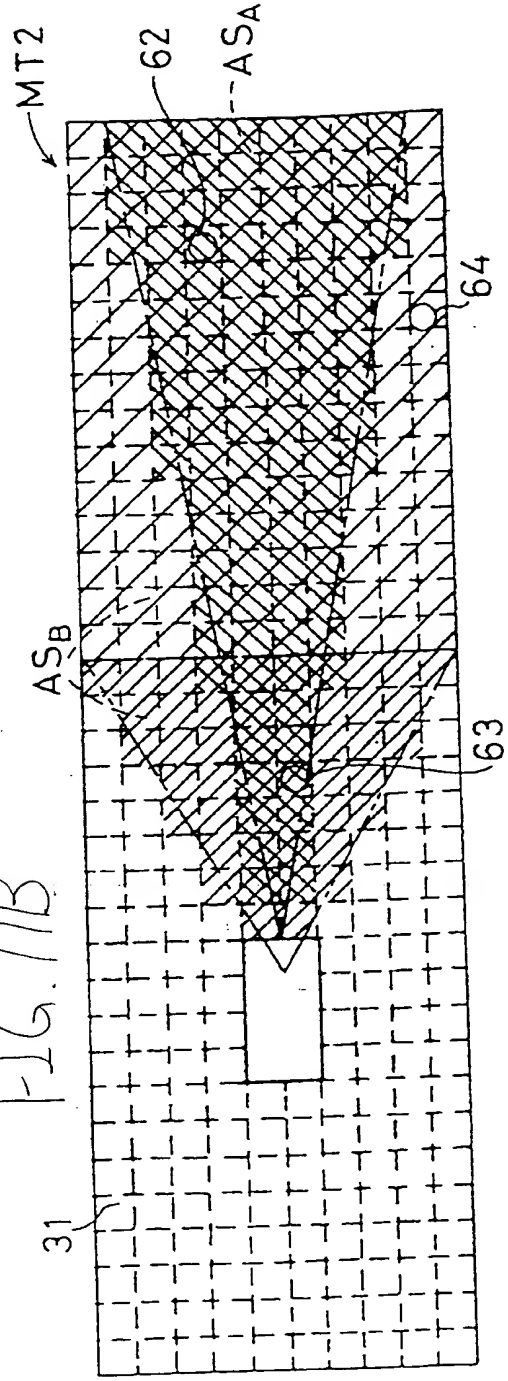


FIG. 11B





 波信頼度
 millimeter wave reliability
 画像信頼度
 image reliability

FIG. 12 A

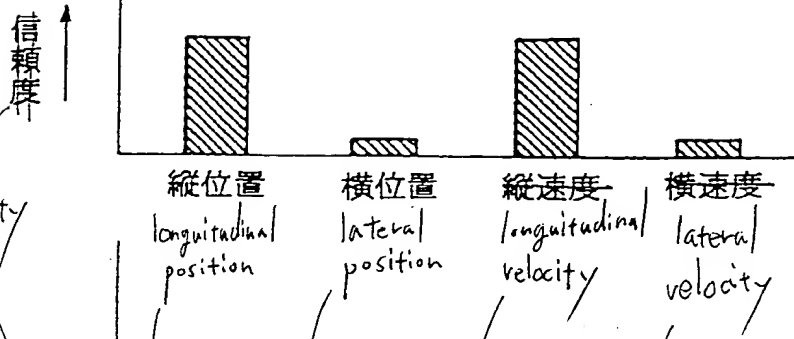


FIG. 12 B

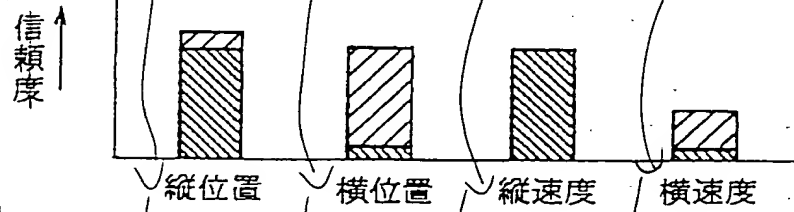


FIG. 12 D

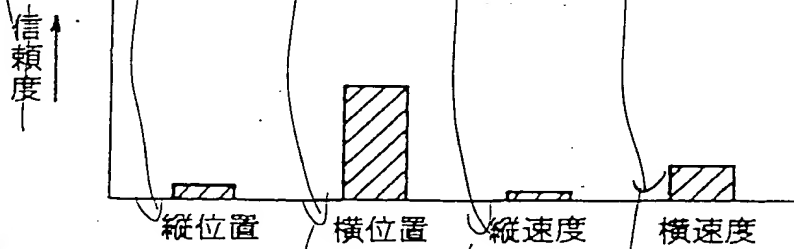


FIG. 12 C

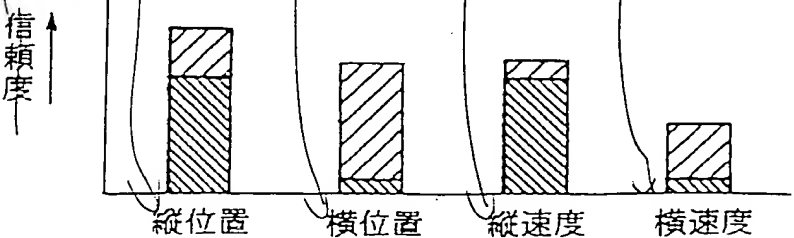


FIG. 13

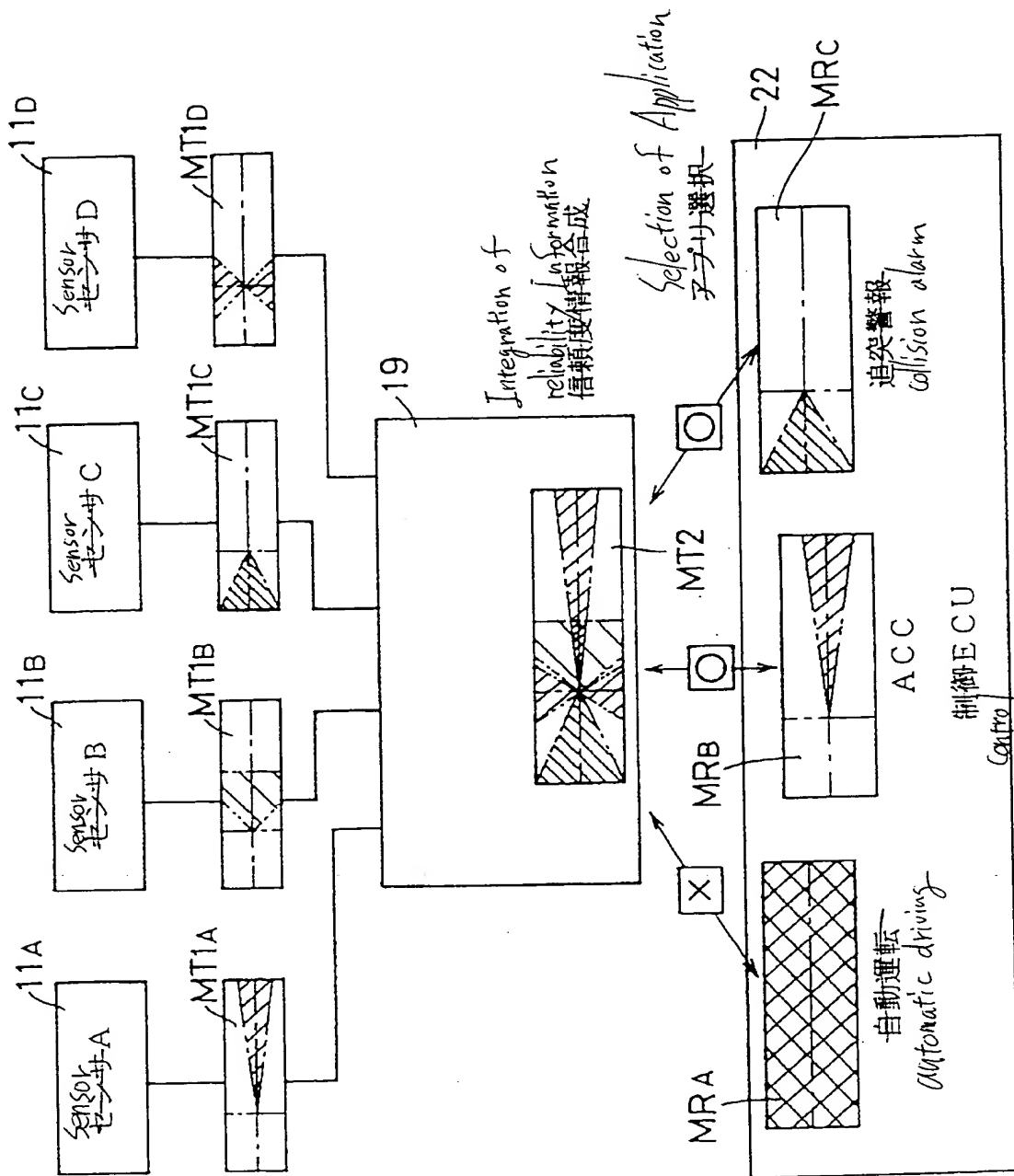
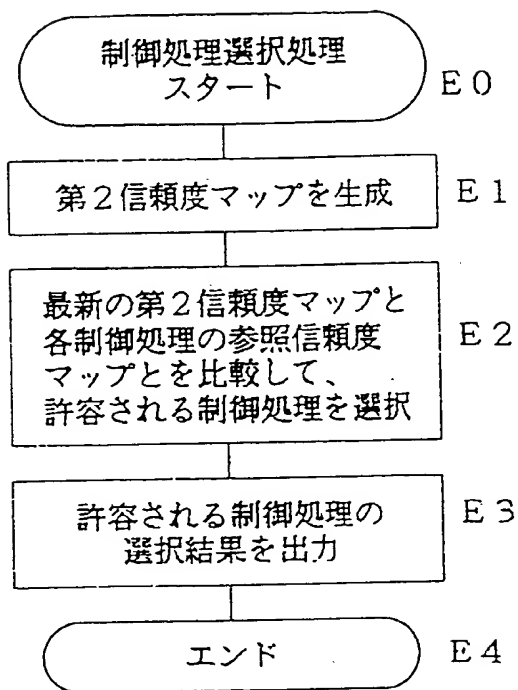
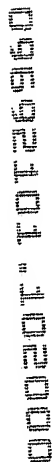


FIG. 14



E0 START SELECTION OF CONTROL PROCESSING
E1 GENERATE SECOND RELIABILITY MAP
E2 SELECT ALLOWABLE CONTROL PROCESSING BY COMPARISON OF LATEST SECOND RELIABILITY MAP
WITH REFERENCE RELIABILITY MAP OF CONTROL PROCESSING
E3 OUTPUT RESULT OF SELECTION OF ALLOWABLE CONTROL OPERATION
E4 END



- D0 START GENERATION OF CONTROL INFORMATION
- D1 DELETE SECOND PARAMETERS FROM PIXELS
 - HAVING SECOND RELIABILITY LESS THAN REFERENCE RELIABILITY
- D2 RETRIEVE PIXEL HAVING SECOND PARAMETER
- D3 RETRIEVE CONTINUOUSLY-POSITIONED PIXELS
- D4 DOES DIFFERENCE IN RELATIVE SPEED BETWEEN SECOND PARAMETERS
 - OF CONTINUOUSLY-POSITIONED PIXELS FALL WITHIN A PREDETERMINED RANGE?
- D7 GENERATE CONTROL INFORMATION ABOUT SINGLE OBJECT
 - ON THE BASIS OF SECOND PARAMETERS ASSIGNED TO SINGLE PIXEL
- D5 GENERATE CONTROL INFORMATION ABOUT SINGLE OBJECT
 - BY INTEGRATION OF SECOND PARAMETERS ASSIGNED TO ALL CONTINUOUSLY-POSITIONED PIXELS.
- D6 GENERATE CONTROL INFORMATION FOR SINGLE OBJECT
 - BY INTEGRATION OF SECOND PARAMETERS FOR EACH SET OF PIXELS
 - WHOSE RELATIVE VELOCITIES DIFFER FROM EACH OTHER WITHIN A PREDETERMINED RANGE.

FIG. 16A

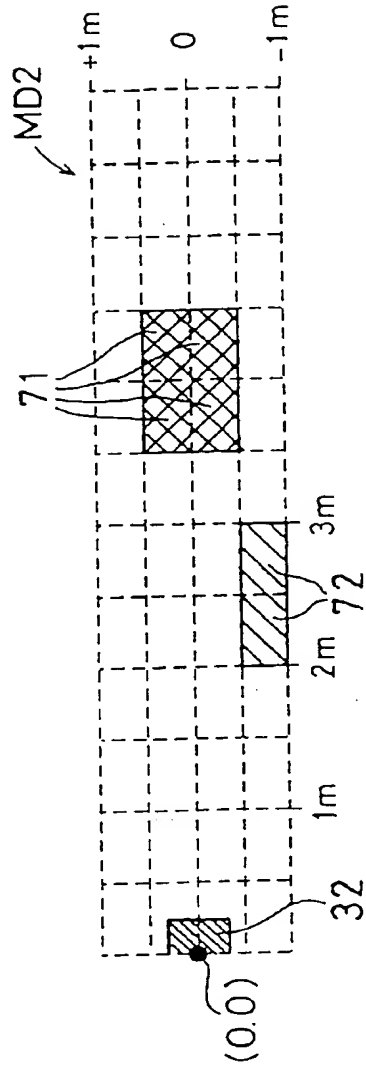


FIG. 16B

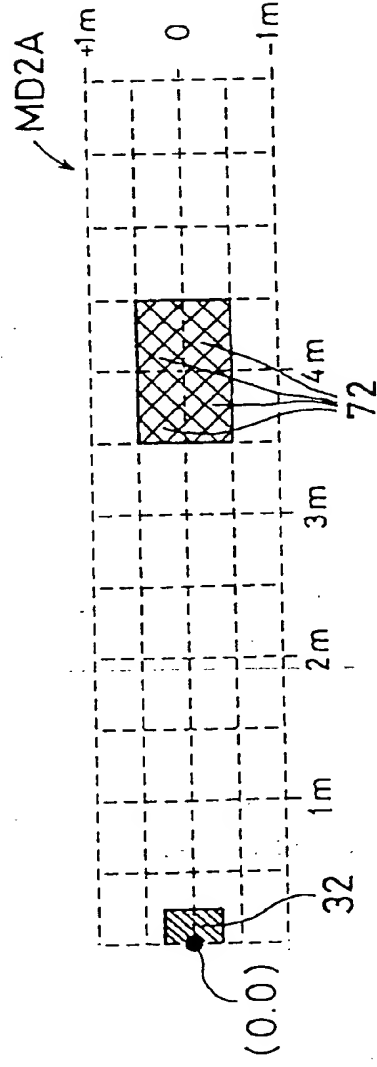
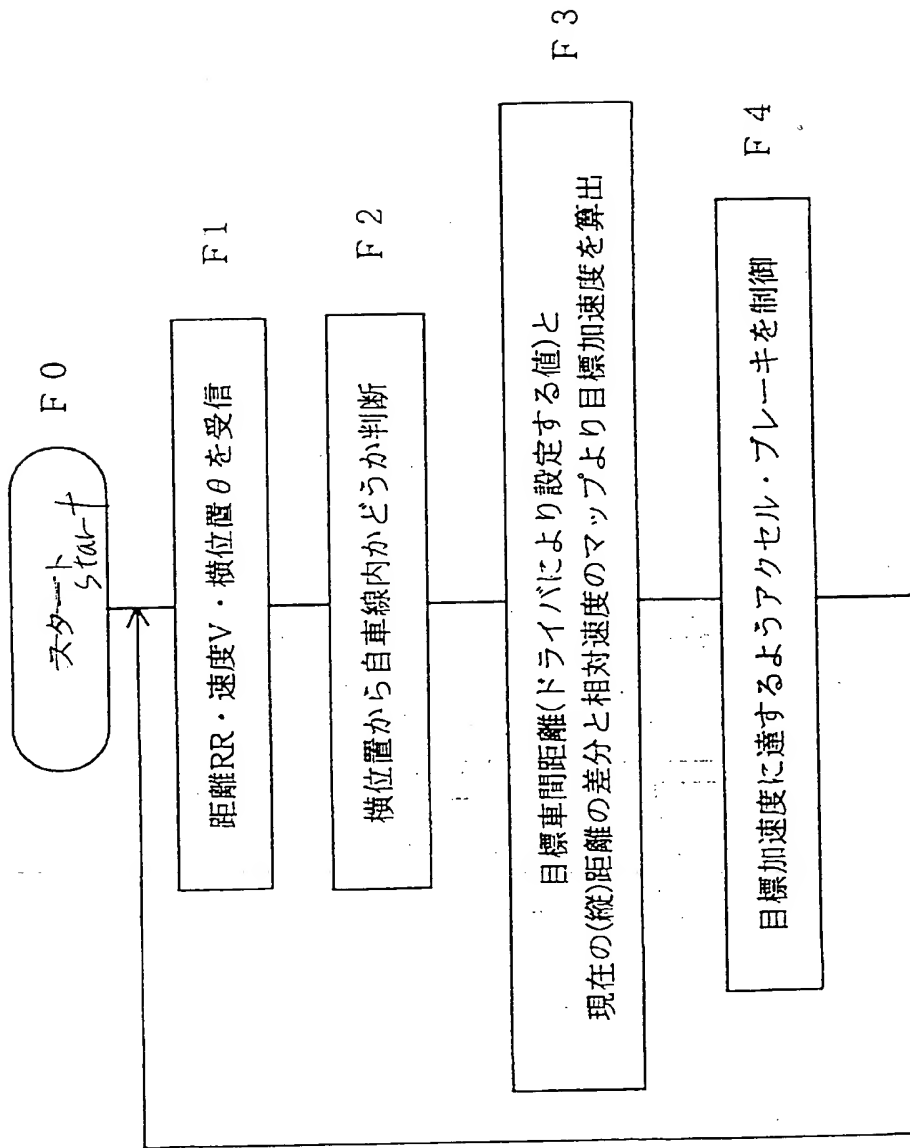


FIG. 17



F1 RECEIVE DISTANCE RR, VELOCITY V, LATERAL POSITION θ
 F2 DETERMINE WHETHER OR NOT OBJECT IS LOCATED IN THE LANE DOWN
 WHICH VEHICLE IS DRIVING, FROM LATERAL POSITION
 F3 CALCULATE TARGET ACCELERATION FROM DIFFERENCE
 BETWEEN TARGET CAR-SPACE DISTANCE (SET BY DRIVER) AND CURRENT (LONGITUDINAL) POSITION,
 AND RELATIVE VELOCITY MAP
 F4 CONTROL THROTTLE AND BRAKE SO AS TO ATTAIN TARGET ACCELERATION



- | | | |
|---|--|---|
| 101 INFORMATION PROCESSING APPARATUS | 103 INFORMATION CAPTURING APPARATUS | 104 INFORMATION INTEGRATION APPARATUS |
| 105 CONTROLLER | 12 PARAMETER CONVERSION SECTION | 13 CONVERSION INFORMATION MEMORY |
| 11 SENSOR | 15 PARAMETER INTEGRATION SECTION | 17 FIRST RELIABILITY STORAGE SECTION |
| 14 INFORMATION ACCURACY STORAGE SECTION | 19 RELIABILITY INTEGRATION SECTION | 21 ENVIRONMENT RECOGNITION SECTION |
| 18 FIRST RELIABILITY DERIVATION SECTION | 23 REFERENCE RELIABILITY STORAGE SECTION | 24 CONTROL INFORMATION GENERATION SECTION |
| 22 PROCESSING SELECTION SECTION | 6 IGNITION SWITCH | 27 INTERNAL COMBUSTION ENGINE |
| 25 PROCESSING EXECUTION SECTION | | 28 BRAKE MECHANISM |
| 29 ALARM | | |
| | 31 DETECTION SPACE | |